

WHAT IS CLAIMED IS:

1. A sonic- or ultrasonic flowmeter comprising:
 - a pipe segment (27, 61),
 - 5 -- to be connected to a first and a second pipe (17, 19), each having a diameter, which complies with an industry standard for pipe diameters used in differential pressure flow measurement,
 - having a length (L), which is equal to a standard length for a flow restricting element of a differential pressure flowmeter,
 - 10 -- having a diameter (D), which is equal to a standard for pipe diameters used in differential pressure flow measurement,
 - comprising a first standard connector (29) located on a first end of the pipe segment (27, 61) and a second standard connector (31) located an a second end of the pipe segment (27, 61),
 - 15 - a primary flow sensor,
 - comprising at least one sonic- or ultrasonic transducer (35) for transmission and/or reception of sonic- or ultrasonic signals (39) through
the pipe segment (27, 61), mounted on the pipe segment (27, 61), and
 - 20 - a sensor electronic (41) for providing a measurement signal representing a flow of a fluid through the pipe segment (27, 61), based on signals received by the sonic- or ultrasonic transducers (35).
- 25 2. Sonic- or Ultrasonic flowmeter according to claim 1, wherein the first and the second standard connector (29, 31) are flanges or pipe sections, which are to be welded onto ends of the first and the second pipe (17, 19).
- 30 3. Sonic- or Ultrasonic flowmeter according to claim 1, wherein the sonic- or ultrasonic transducers (35) are inserted in opposing bores (39) in the pipe segment (27, 61).

4. Sonic- or Ultrasonic flowmeter according to claim 1, wherein the sonic- or ultrasonic transducers (35) are mounted on opposing outside walls (57) of the pipe segment (27).
5. Sonic- or Ultrasonic flowmeter according to claim 1, comprising a housing (43) for the sensor electronic (41), which is mounted on the pipe segment (27).
6. Sonic- or Ultrasonic flowmeter according to claim 1, comprising
 - a housing (63) for the sensor electronic (41),
 - a mounting section (69) located on an outside wall (71) of the housing (63) for mounting the housing (63) apart from the pipe segment (61), and
 - a cable connector (73) located on an outside wall (75) of the housing (63), for connecting the sonic- or ultrasonic transducers (35) to the sensor electronic (41).
7. Sonic- or Ultrasonic flowmeter according to claim 1, comprising
 - a housing (63) for the sensor electronic (41), and
 - a mounting section (69) located on an outside wall (71) of the housing (63) for mounting the housing (63) apart from the pipe segment (61),
 - comprising two pairs of threaded bores (77, 79), wherein the bores (77, 79) form a rectangle and their position is equal to a position of threaded bores in normed oval flanges of differential pressure transducers.
8. Sonic- or Ultrasonic flowmeter according to claim 7, wherein a cable connector (83) for connecting a sonic- or ultrasonic transducer (35) is located between the threaded bores (77, 79) of each pair of threaded bores (77, 79).